

shy Im. 16

Work Order ID 78096

78096

Page 1

December-28-11 3:32:34 PM

Item ID: D3959-1KGY

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Vertical Tunnel, Aft Center

Start Date: 28/12/2011 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 16/01/2012 Req'd Qty: 1.00 *1*

Customer:

Reference:

Approvals: Process Plan: M.L. J Date: 11/12/28 Tooling: Date:

Run Start *NR1*

QC: Date: SPC (Y/N): Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D3959	B

100 0.00

100

HandThermo

Memo

0.00

Hand Finishing Thermoforming

1-Cut Sheet to required Blank size

21

12/01/09

105 0.00

105

HandThermo

Dry Material

Memo

0.00

Hand Finishing Thermoforming

Dry Sheet as per QSI022 KYDEX

Temp: 150°F

Time IN: 7:00 pm 12/01/08

Time OUT: 5:00 am 12/01/09

21

12/01/09

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 78096***78096***

Page 2

December-28-11 3:32:34 PM

Item ID: D3959-1KGY Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Vertical Tunnel, Aft Center
Start Date: 28/12/2011 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 16/01/2012 Req'd Qty: 1.00 ***1*** Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110 *110* Thermoform Thermoforming Machine	Memo 1-Machine Set-Up 2-Pre-heat Tool to required temp. 3-Thermoform as per Dwg and Folio #FTA056 using tool DT9332-A Dwg Rev: <u>B</u> Folio Rev: <u>C</u>	0.00 0.00				x/			DL 12/01/09
120 *120* QC Quality Control	QC2- Inspect parts off machine FAI/FAIB Memo Visually inspect part for proper formation and texture	0.00 0.00				x/			DL 12/01/09
130 *130* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00				(x/)			B 12/01/09

W/O:		WORK ORDER CHANGES					
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December-28-11 3:32:34 PM

Item ID: D3959-1KGY Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Vertical Tunnel, Aft Center
 Start Date: 28/12/2011 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 16/01/2012 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140		0.00							
140						x 1			OK
HandThermo	Memo	0.00							
Hand Finishing Thermoforming	1-Trim to finished dimensions as per Dwg								12/01/12
150		0.00							
150						x 1			OK
QC	Memo	0.00							
Quality Control	Complete FAI document								12/01/12
160		0.00							
160									
QC	Memo	0.00							
Quality Control									

Scanned 12/01/13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

780.96

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N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 28/12/2011 **Start Qty:** 1.00 ***1***

Cust Item ID:

Required Date: 16/01/2012 **Req'd Qty:** 1.00 *** 1 ***

Customer:

Reference:

Approvals: _____ **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

170 Identify as per dwg & Stock Location: THERMO 0.00

170

ATTN: WO # 28094

Packaging

Memo

0.00

Packaging

180	QC21- Final Inspection - Work Order Release	0.00
-----	---	------

180

QC

Memo

0.00

Quality Control

12/1/18

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

Picklist Print

December-28-11 3:32:38 PM

Page 1

Work Order ID: 78096

78096

Parent Item: D3959-1KGY

D3959-1KGY

Parent Item Name: Vertical Tunnel, Aft Center

Start Date: 28/12/2011

Required Date: 16/01/2012

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP RevA: New issue DD verified by:EC
Add Step 105 Dry Material 10/04/021 DL

IPP Rev B

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MKYD6185S.080-P3-52068		Purchased	No			100	sf	1,011.893	6.729	6.729			

MKYD6185S 080-P3-52068

Kydex steel grey

**

Location

therm

111807

119476

Loc Qty

1011.893107

10.4896282

1001.40348

Loc Code

6.729 sg dt

12/01/13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

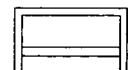
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

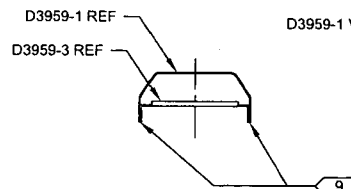
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

ITEM	QTY -041 KIV	QTY -041 KGY	PART NUMBER	DESCRIPTION
	X		D3959-041KIV	VERTICAL TUNNEL (IVORY)
		X	D3959-041KGY	VERTICAL TUNNEL (STEEL GRAY)
1	1		D3959-1KIV	VERTICAL TUNNEL (IVORY)
2	1		D3959-1KGY	VERTICAL TUNNEL (STEEL GRAY)
3		1	D3959-3KIV	DUCT, VERTICAL TUNNEL (IVORY)
4		1	D3959-3KGY	DUCT, VERTICAL TUNNEL (STEEL GRAY)
10	A/R	A/R	EZ250150	ADHESIVE, 3M SCOTCH WELD

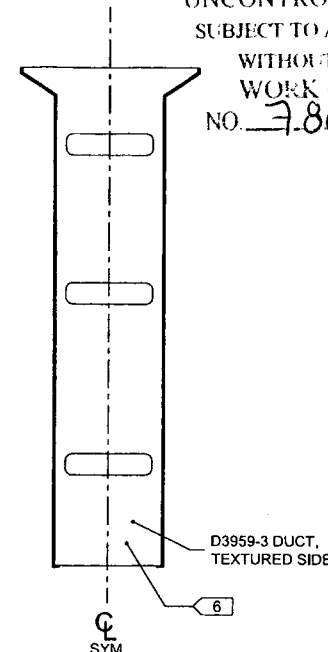
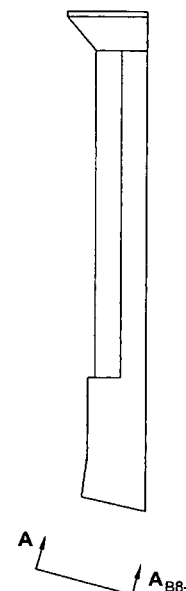
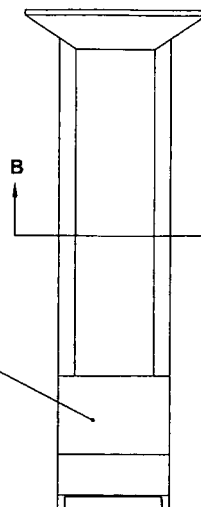
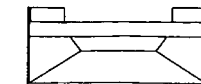


VIEW A-A B3-1



SECTION B-B

D3959-1 VERTICAL TUNNEL,
TEXTURED SIDE



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 7.8096

D3959-041 VERTICAL TUNNEL, AFT CENTER

NOTES:

- 1) MATERIAL: SEE TABLE
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N D3959-041KIV OR D3959-041KGY USING VIBRATING STYLUS
- 7) WEIGHT: 2.8 lbs
- 8) TRIM D3959-3 DUCT AS REQUIRED TO ALLOW PROPER MATING
- 9) SEAL MATING EDGES WITH EZ250150 ADHESIVE ALONG MATING PERIMETER WITH MINIMUM THICKNESS OF 0.020"

RELEASED
2010-01-06
AM

B	ADD -3/-041	PH	09.12.15
A	NEW ISSUE	PH	09.06.17
REV.	DESCRIPTION	BY	DATE
DESIGN	PH		
DRAWN	PH		
CHECKED	GP		
MFG. APPR.	SP		
APPROVED	SH		
DE APPR.	SH		
DATE	09.12.15		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. D3959
TITLE VERTICAL TUNNEL (206 L3/L4)
REV. B
SHEET 1 OF 3
SCALE NTS

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

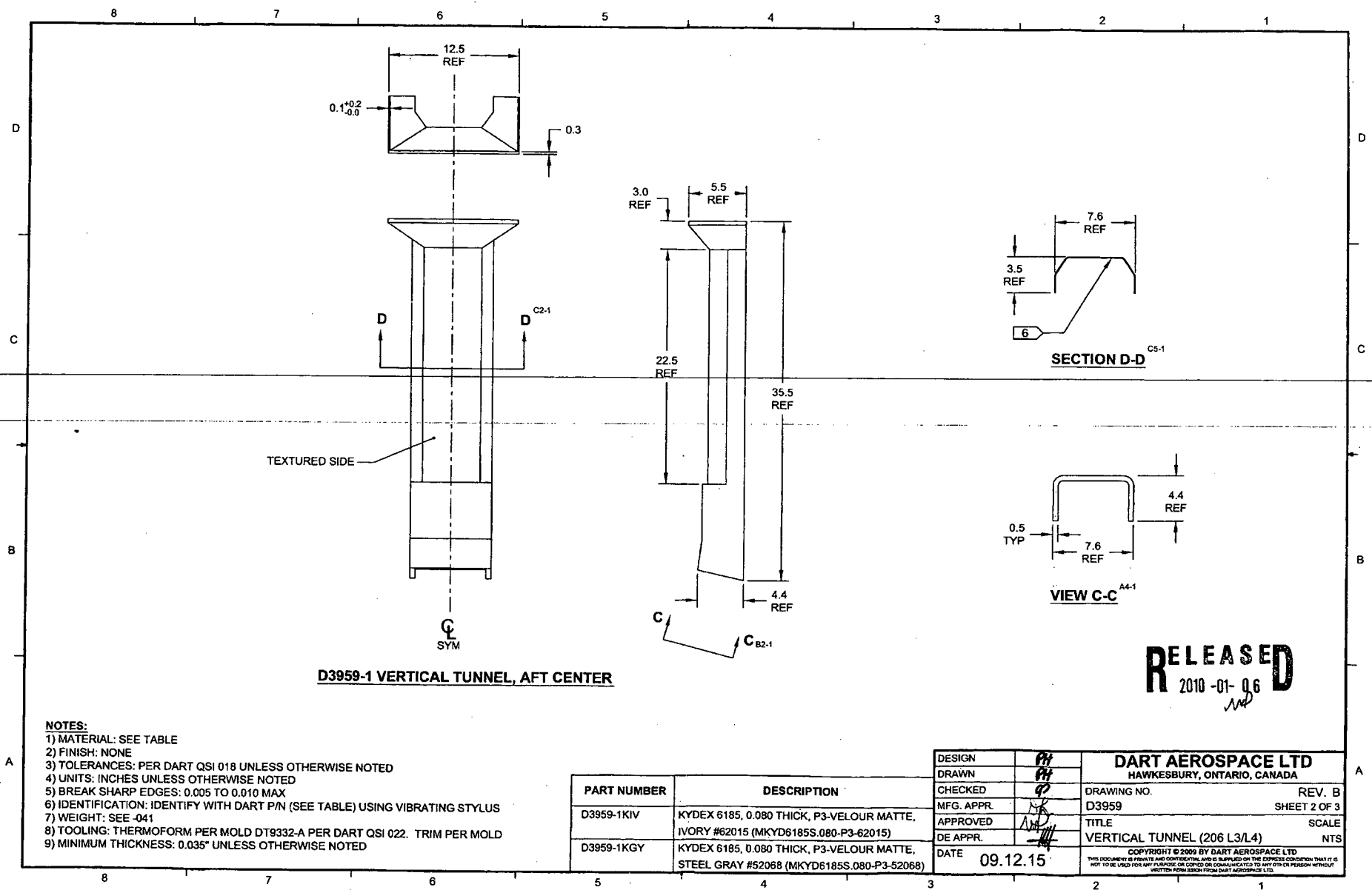
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

78096



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

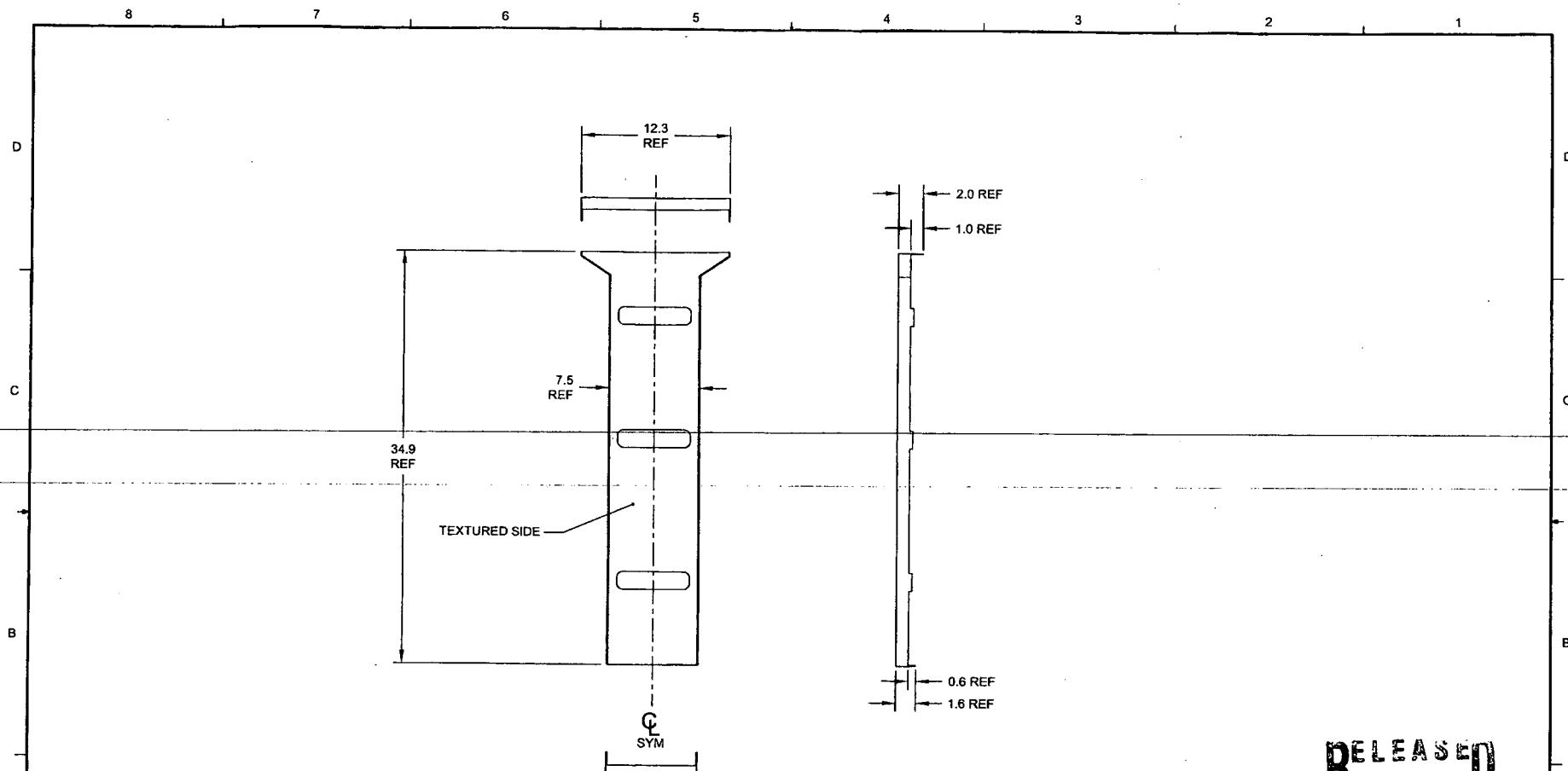
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries.

780916



D3959-3 DUCT, VERTICAL TUNNEL, AFT CENTER

NOTES:

- 1) MATERIAL: SEE TABLE
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N (SEE TABLE) USING VIBRATING STYLUS
- 7) WEIGHT: SEE -041
- 8) TOOLING: THERMOFORM PER MOLD DT9332-B PER DART QSI 022. TRIM PER MOLD
- 9) MINIMUM THICKNESS: 0.035" UNLESS OTHERWISE NOTED

PART NUMBER	DESCRIPTION
D3959-3KIV	KYDEX 6185, 0.080 THICK, P3-VELOUR MATTE, IVORY #62015 (MKYD6185S.080-P3-62015)
D3959-3KGY	KYDEX 6185, 0.080 THICK, P3-VELOUR MATTE, STEEL GRAY #52068 (MKYD6185S.080-P3-52068)

DESIGN	PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	PH		
CHECKED	GP	DRAWING NO.	REV. B
MFG. APPR.	GP	D3959	SHEET 3 OF 3
APPROVED	JWS	TITLE	SCALE
DE APPR.	JWS	VERTICAL TUNNEL (206 L3/L4)	NTS
DATE	09.12.15	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMERCE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order: 78096
Description:	Part Number: D3959-1K6Y
Inspection Dwg: 13959 Rev: B	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST
THERMOFORMING SECTION

Description	Accept	Reject	Method of Inspection	Comments
Inside Radii less than $\frac{1}{8}$ "	✓			
Shape Definition	✓			
Texture Retention	✓			
Material imperfections such as bumps, cracks, voids, scratching	✓			

Measured by: DR

Date: 12/01/09

TRIMMING SECTION

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
12.5	Ref.	12.65"	✓		TAPE DL-01	
35.5	Ref.	35.5"	✓		TAPE DL-01	
5.5	Ref.	5.5"	✓		TAPE DL-01	
4.4	Ref.	4.4"	✓		TAPE DL-01	
0.1"	+0.2 -0.2	0.186"	✓		USE DL-02	
0.5"	Ref.	0.531"	✓		USE DL-02	
0.035"	M.N.	0.063"	✓		USE DL-02	

Measured by: DR

Date: 12/01/12

Audited by: S

Date: 12/01/13

Preliminary Approval:

Date:

Rev	Date	Change	Revised by	Approved
B	10.04.14	Added preliminary approval	KJ	

10.04.14